

IN THE CLAIMS:

Please amend the claims as follows.

Please cancel claim 2 from consideration without prejudice or disclaimer.

Please add new claim 19 to the application.

1. (Currently Amended) An optical data transmission system, the optical data transmission system comprising a hub, a kerb location, a converter, an optical router, and a plurality of ~~ONUs~~optical network units, the optical network units~~ONUs~~ being capable of transmitting respective data signals to the kerb location, the optical router being capable of routing wavelength channels having predefined wavelength ranges assigned to respective optical network units~~ONUs~~ for transmission to the hub, and the converter being capable of converting the data signals into the wavelength channels, wherein the data signals are optical signals.

2. (Cancelled)

3. (Original) An optical data transmission system according to claim 1 in which the data signals are used as pump signals to generate the wavelength channels.

4. (Original) An optical data transmission system according to claim 1 in which the data signals are within a wavelength range which does not include the wavelength or wavelengths of the wavelength channels.

5. (Original) An optical data transmission system according to claim 1 in which the wavelength channels are generated by a plurality of optically pumped sources.

6. (Original) An optical data transmission system according to claim 5 in which the optically pumped sources generate light having different wavelengths in order to define the wavelength channels having predefined distinct wavelength ranges.

7. (Original) An optical data transmission system according to claim 5 in which the optically pumped sources each comprise a laser cavity, mirrors defining the cavity, and wavelength selective elements inside the cavity.

8. (Currently Amended) An optical data transmission system according to claim 1 in which respective ones of the optical network unitsONUs are sufficiently similar that they are interchangeable.

9. (Currently Amended) An optical data transmission system according to claim 5~~1~~ in which the optically pumped sources are injection locked lasers.

10. (Original) An optical data transmission system according to claim 9 in which the injection wavelength is selected by a wavelength division multiplexer and/or a arrayed waveguide grating.

11. (Currently Amended) An optical data transmission system according to claim 54 in which the optically pumped sources are external cavity lasers.

12. (Original) An optical data transmission system according to claim 10 in which the optical router is within the laser cavity of at least one optically pumped source.

13. (Currently Amended) An optical data transmission system according to claim 1 in which ~~the-a~~ pumping light is at a wavelength different to the wavelength of light which is used to carry data traffic in upstream and downstream directions.

14. (Original) An optical data transmission system according to claim 1 in which the optical router is a wavelength division multiplexer.

15. (Original) An optical data transmission system according to claim 1 in which the optical router is an arrayed waveguide grating arrayed waveguide grating.

16. (Currently Amended) A method of transmitting data in an optical data transmission system, ~~the optical data transmission system comprising a hub, a kerb location, a converter, an optical router, and a plurality of ONUs, the method comprising~~ the steps of:

the ONUs transmitting, with an optical network unit, respective data signals to the a kerb location; and

the optical router routing wavelength channels having predefined wavelength ranges assigned to respective optical network units ONUs for transmission to the a hub with an optical router; and,

the converter converting the data signals into the wavelength channels with a converter, wherein the data signals are optical signals.

17. (Currently Amended) An optical router for an optical data transmission system, the optical data transmission system comprising a hub, a kerb location, and a plurality of optical network units ONUs, the optical network units ONUs being capable of transmitting respective data signals to the kerb location, the optical router being capable of routing wavelength channels having predefined wavelength ranges assigned to respective optical network units ONUs for transmission to the hub, and the optical router comprising a converter to convert the data signals into the wavelength channels wherein the data signals are optical signals.

18. (Currently Amended) A converter for an optical data transmission system, the optical data transmission system comprising a hub, a kerb location, an optical router, and a plurality of optical network unitsONUs, the optical network unitsONUs being capable of transmitting respective data signals to the kerb location, the converter being capable of converting the data signals into wavelength channels having predefined wavelength ranges assigned to respective optical network unitsONUs, and the optical router being capable of routing the wavelength channels for transmission to the hub wherein the data signals are optical signals.

19. (New) An optical data transmission system, comprising:
transmitting means for transmitting, with an optical network unit, respective optical signals to a kerb location;
routing means for routing wavelength channels having predefined wavelength ranges assigned to respective optical network units for transmission to a hub with an optical router; and
converting means for converting the optical signals into the wavelength channels with a converter.